

# ***Headquarters U.S. Air Force***

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***Integrity - Service - Excellence***



## **Air Force Cyber Operations Command**

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Commander, 8AF**

**5 Jan 2007**

***Mission:  
Warfighting***

**This Briefing is:  
UNCLASSIFIED**



# ***Presentation Overview***

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- **Cyberspace Command Mission Analysis**
- **Cyberspace Operations**
- **Global Effects C2**



# Mission & Intent Brief Back

- **CSAF Intent: Redefine Airpower** by extending our global reach and global power into a new domain ... of electronics and the electromagnetic spectrum.
- **Warfighting Mission: Integrate AF's global kinetic and non-kinetic strike capability** ... through the full range of military operations ... with authority to become COMAFFOR for all USAF cyberspace.
- **Administrative Mission: Develop an "on ramp" to transition the Mighty Eighth into a MAJCOM Component** responsible for ... the full spectrum of integrated global effects.





# Endstates & Key Tasks

- Present forces to **STRATCOM** for global operations or ... through **COMAFFOR/JFACC** for theater operations.
- Provide COCOM with viable military **option ... and execution** in air, space, and cyberspace.
- Organize your NAF around an **AOC, able to operate 24x7x365**, interoperable with all other AOCs
- Advocate your requirements to ACC and Ai Staff functional elements to **ensure they are given equal weight to other warfighting capabilities**
- **Synchronize activities** of other organizations ... such as AFCA, AIA, AFC2ISRC, and AFRL





# ***Missions/Phases***

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## **Missions**

- **Integrate AF's global kinetic and non-kinetic strike capability**
  - **OT&E to provide full spectrum of integrated global effects**
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## **Phases**

1. **Change culture** from cyber as force enabler to warfighting force
  2. **Organize and present forces** for full spectrum, integrated operations—peacetime through combat, global and theater
  3. **Advocate for Cyber manpower, resources, and a requirement CONOPS** to provide Cyber forces and capabilities to COCOMS
  4. Transition to the **Cyber force provider** (MAJCOM)
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# ***Prioritized Essential Tasks***

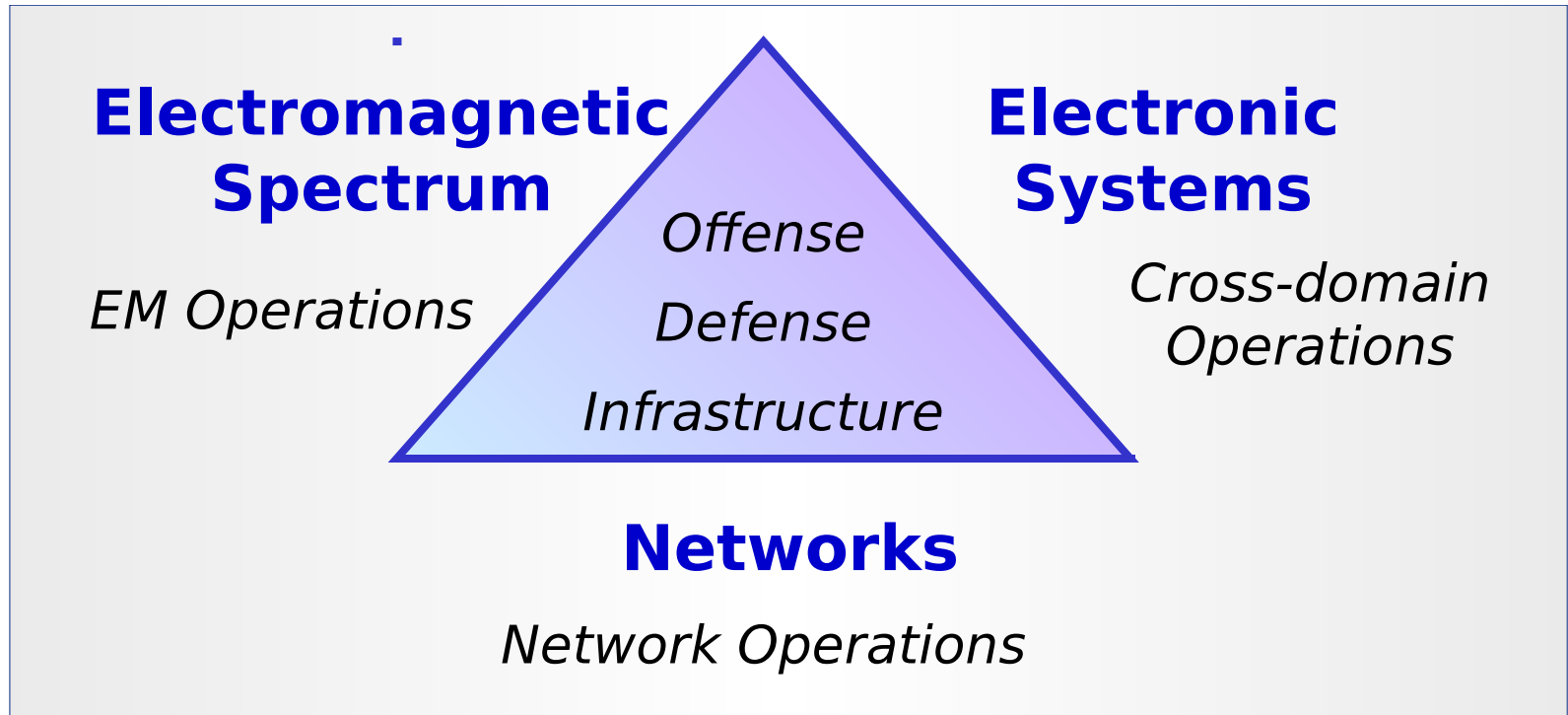
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- ❑ Build CONOPS/CONEMP**
- ❑ Baseline Global Effects Force - Define Gaps/METLs**
- ❑ Identify Manpower Requirements**
- ❑ Identify Resource and Support Requirements**
- ❑ Develop Cyber COP**
- ❑ Baseline Capabilities/ Threats (EOB/FOB)**
- ❑ ID Intelligence Requirements**
- ❑ Integrate with Theater Commanders and Functional POCs**
- ❑ Resolve CD & “fratricide” issues (ROE & Authorities)**
- ❑ Stand up a Cyber PE & advocate in AF Corporate Structure**
- ❑ Develop initial POM capability (with Air Staff support)**



# ***Background: Cyberspace***

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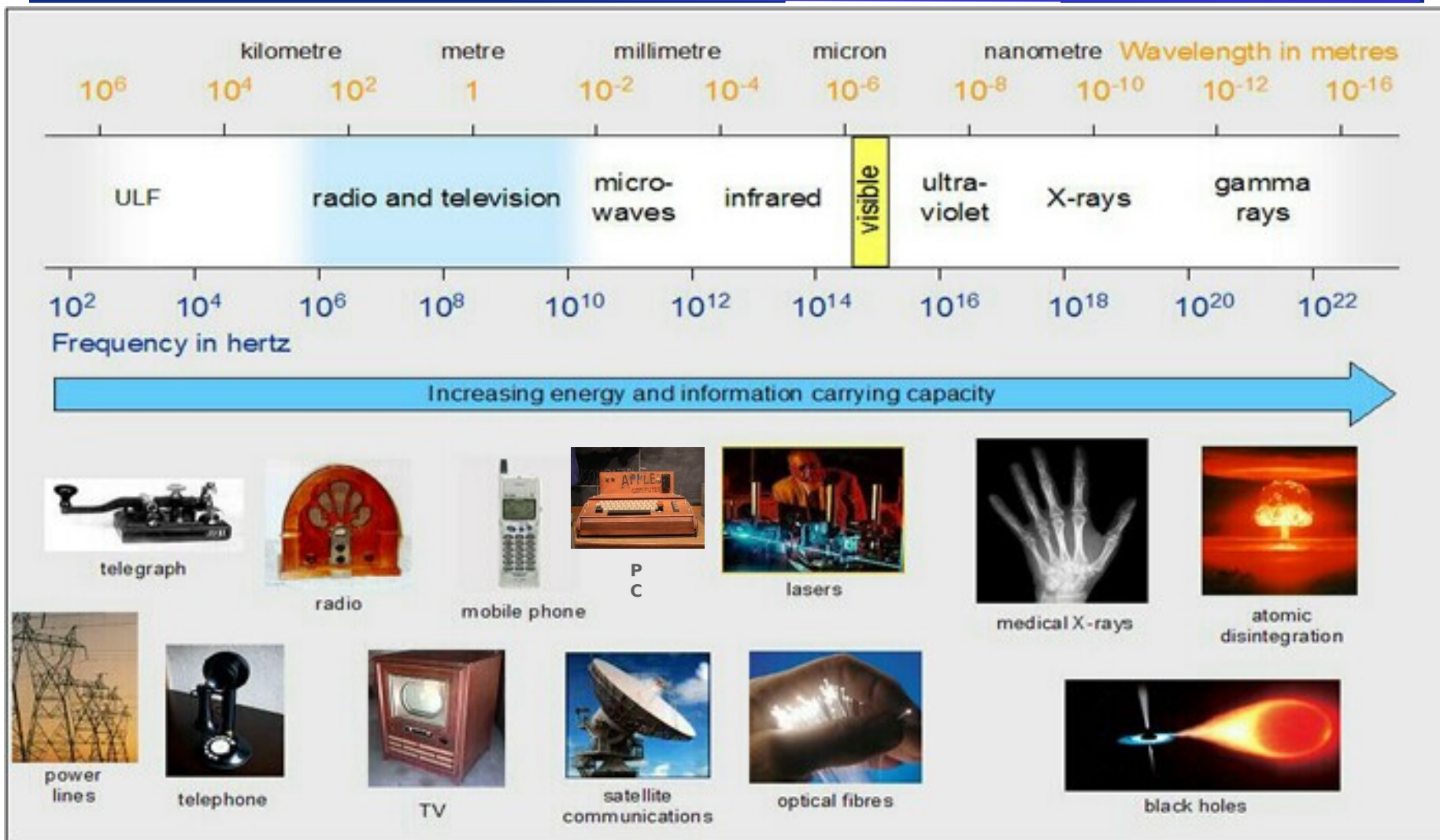


**DoD Definition: Cyberspace is a domain characterized by the use of electronics and the electromagnetic spectrum to store, modify, and exchange data via networked systems and associated physical infrastructures**





# Exploiting the EMS

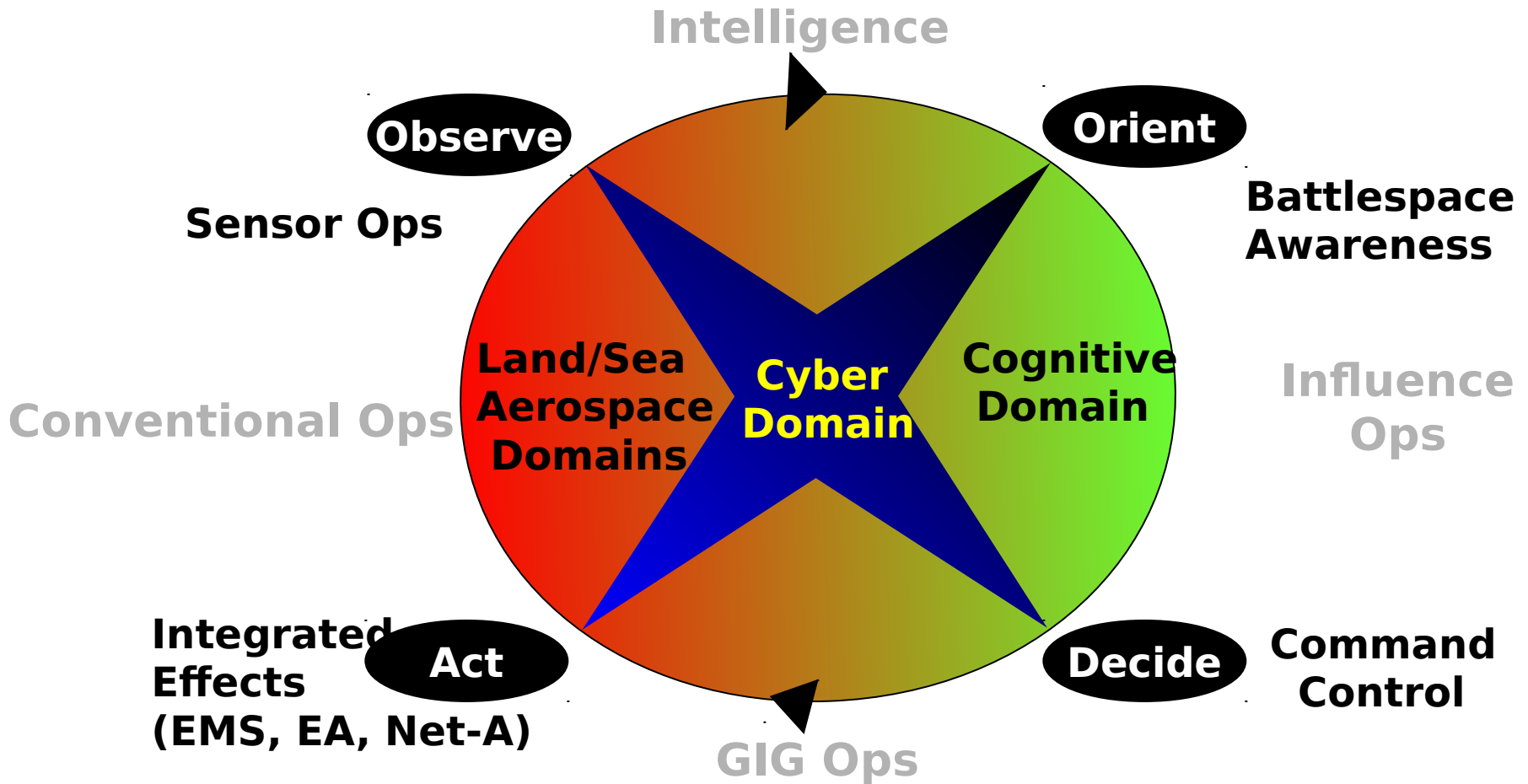


**DC to Daylight to Gamma Rays and Beyond**





# ***The Battle in Cyberspace***



**Offense, Defense, Infrastructure Elements**



# ***“Fly & Fight” in Cyberspace***

**Cyber  
Ops**

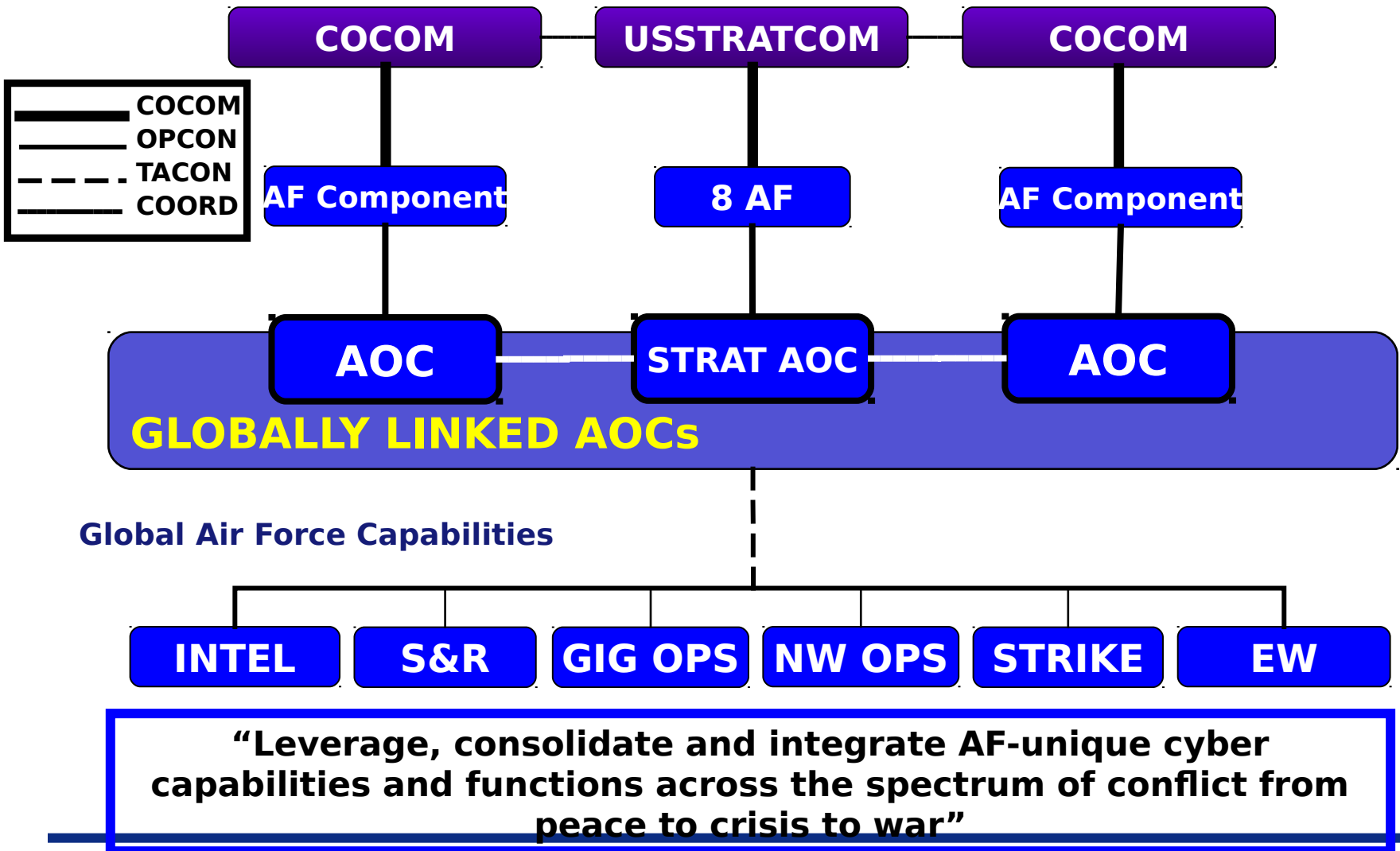


- **Operational Freedom of Action**
  - Networked Systems Survivability
  - Counter-cyber (Defense) Ops
- **Global Effects Integration**
  - Surveillance/Reconnaissance
  - Battlespace Awareness
  - Command & Control
  - Combat Systems Effectiveness
- **Offensive Cyber Ops**
  - IADS, C2, Control Systems
  - Adversary Combat Systems
  - Adversary Information Systems
- **Enabling Ops:** Intel, GIG Ops, IFO

**For USAF, Cyberspace is a *Warfighting* Domain**



# ***Global Effects C2 Concept***





# 8 AF and Cyber Ops

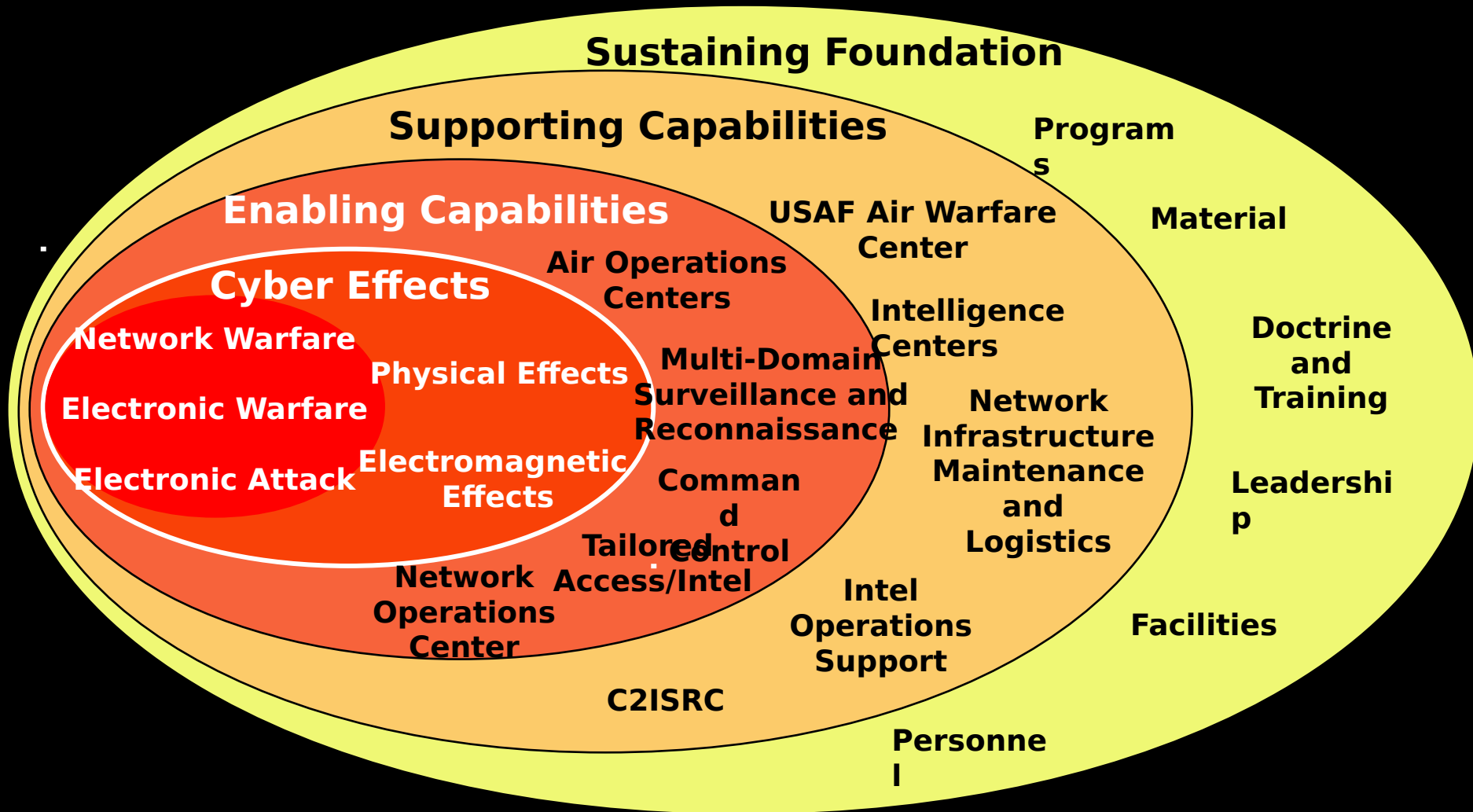
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- **Global Strike: B-2, B-52**
- **Network Operations: AFNOC, I-NOSC, Network Warfare Wing**
- **Surveillance/Reconnaissance: RC-135, U-2, Global Hawk**
- **C2/Battle Management: AWACS, JSTARS, CAOC, ASOG, E-4**
- **Electronic Warfare: EC-130 Compass Call**
- **Intelligence: Distributed Common Ground Station (DCGS)**





# Effects-based Cyber Enterprise





# Summary

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- AF conducts Cyber Ops to **ENSURE OUR FREEDOM OF ACTION** and **DENY FREEDOM OF ACTION TO OUR ADVERSARIES**
- Air Force views Cyberspace as a warfighting domain on par with the air, space, ground, and maritime domains
- DoD views Cyberspace as much more than the Internet ... a domain characterized by the use of electronics and the electromagnetic spectrum to store, modify, and exchange data via networked systems and associated physical infrastructures
- Sensors, C2 elements, and shooters are networked together via Cyberspace to produce integrated cross-domain effects
- Cyberspace ops require secure, survivable, and resilient networks, infrastructure, and electromagnetic spectrum